JANUARY 1991 VOLUME 6, NUMBER 1 $10 YEAR

SEATTLE AREA TIXEX/SINCLAIR USER GROUP NEWSLETTER

SWUM

SEATUG MEETING

January 3, 1991
Thursday 7:30pm
University Federal Savings Bank
8517 35th Ave. NE, Seattle

This month as a special guest we have snow! If it snows again the meeting may be called off.

Call 323-2168 for a recorded message the day of the meeting for last minute info.

ANNIVERSARY ISSUE!

A DECADE OF SINCLAIR COMPUTERS

IN THIS ISSUE

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Sir Clive Interview

Decadis: Sinclair

Game Software Review

EDITORS

Robert Cazares
Chuck Kereluck

PRESIDENT

Derryck Turner

V. PRESIDENT

Gerry Desmairis

SECRETARY

Malcolm Post

TREASURER

Dave Battershill

LIBRARIAN

Dale Fritz

for general info_

Derryck Turner
10909 NE 45 St.
Kirkland, WA.
98033

for newsletter submissions_____

Chuck Kereluck
9013 32 Ave. NE
Seattle, WA.
98115

for newsletter exchange_____

Robert Cazares
P.O. Box 30125
Seattle, WA.
98013

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SWUM

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Ken also recommends several QL books for our reading pleasure.

Amazing, huh?

We thought so too!

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You've met the man, now read his article. Mike Stone explores the world of the Z88 laptop.

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PIX-FX author Mike DiRienzo explains how to print bit patterns.
It helps if you have a 2068...

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Someone's still getting Spectrum software and we ain't tellin' who it is.
With games like Nightbreed, Mutants, Tank, Captain Blood, and Gift from the Gods, who has to EVER leave the house. Job, what job?

sinclair, decadis 14

What a deal, only $199.00, plug it into your TV and a cassettte recorder and go knock yourself out.
The ZX80 was introduced in 1981 and has made computer junkies out of most of us, if you weren't one to begin with.

MORE TOYS PLEASE!

sinclair ECHO 15

Can you say, "300 Baud"? Sure you can!

The most fun you can have with your clothes on is using a modem.

Dust'em off and blaze down the phone lines.

Letters to the editor

Delemmas
Poke Problems
Abort,retry,fail
Tape load help

Could this be you?

Classifieds

Buy, sell, trade.

Remember: members can advertise free! So give us what ya'got to sell.

Next Month

SYNC reprint
Game review
LOG-ON!
Fun with Clive
Speedboat Giveaway
AND MORE!

EDITORIAL

I have to say that I am pleased with the input SEATUG has received from local members concerning articles for the newsletter and in general for the comraderie we have shown with other the past year. All the Sinclair machines are covered in one sense or another and this makes for a well rounded club in general. We don't seem to have the single mindedness of one operating system when we talk about computers. We all have our personal favorites when it comes to specific computers and programs but we never seem to let it get in the way of the enjoyment we get out of operating our machines. Really, what's the best anyway? What ever works for you should be the correct answer. And when the club gets together on thursday nights for the meeting we are there for the common interest we share in computers and most importantly to have fun! Which is what it should be. The past year was one full of changes for me. This didn't allow me the time I would have liked to have devoted to putting together the newsletter and making it even better. This month I had the opportunity to spend some extra time and clean up the layout and graphics and to my surprise still using the T/S 2068 to accomplish most of the graphics while incorporating the IBM PC to handle all the text editing and spell checking of articles. So, for 1991 SWYM has a new face and a few new members. Hopefully the support will continue through 1991 and beyond.

* Robert *

Happy Gregorian New Year!

JAN 1991

ATTENTION BASIC PROGRAMMERS

Z E B U

Zunks Extra Basic Utilites

GIVES YOU 38 NEW COMMANDS AND FUNCTIONS FOR THE 2068

UP/DOWN ARROW KEYS IN EDIT LINE: TRUNCATE EDIT LINE LEFT OR RIGHT OF CURSOR:FAST DELETE KEY FIXES TIMEX BUG:DELETE A WHOLE STATE-MENT BETWEEN COLONS WITH ONE KEY STROKE:PRINT 5 TEXT SIZES WITH MULTIPLE CHARACTER MODIFIERS: 16 BIT POKE:16 BIT PEEK:TRUE 16 BIT AND/OR/XOR OPERATIONS:BLOCK MOVE/SWAP/COPY BYTES,WITH BANK SWITCHING AVAILABLE:LIST A LINE OR A RANGE OF LINES:MERGE BASIC LINES:SEARCH BASIC LINES:SET START OF BASIC TO ANY LINE OR RESET TO ORIGINAL FIRST LINE:GET CRITICAL PROGRAM PARAMETERS:HEX TO DECIMAL TO HEX CONVERSION: DECIMAL TO BINARY BIT PATTERN: READ ANY NUMBER OF CHARACTERS FROM SCREEN TO A STRING VARIABLE :ELECTRIC INK AUTO ROTATES INK COLORS AT SELECTED AREAS:MORE

ZEBU WILL RUN ON ANY 2068 SYSTEM IT CAN RESIDE IN ANY BANK
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SCHEMATICS : DRAFTING

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MINUTES WITH SEATUG

by Malcolm Post, Secretary

MINUTES OF THE TIMEX USERS GROUP
December 6, 1990

The meeting was called to order at 7:54 P.M. by President Derryck Turner. There were nine members present.

The Treasurer, Dave Battershill reported that as of November 30, the treasury contained $220.16.

The editors of our newsletter were congratulated on another fine issue. A question arose as to the derivation of the name SWYM. Several comments were made but the responses were inconclusive.

Chuck brought up a request that the club purchase a kit for an Oliger Disk Interface for the Club so that the newsletter production would be simplified. The vote was in the affirmative and Derryck agreed to assemble the kit. Disk drives are also needed, so Dave offered to donate a pair of single sided drives that he has. Robert also offered a pair of full-height 5.25" drives if the others were not suitable.

Chuck passed around copies of a list he has prepared delineating the duties of the Advertising Co-ordinator for the newsletter SWYM. No further action was taken on filling the position until we can get someone to volunteer.

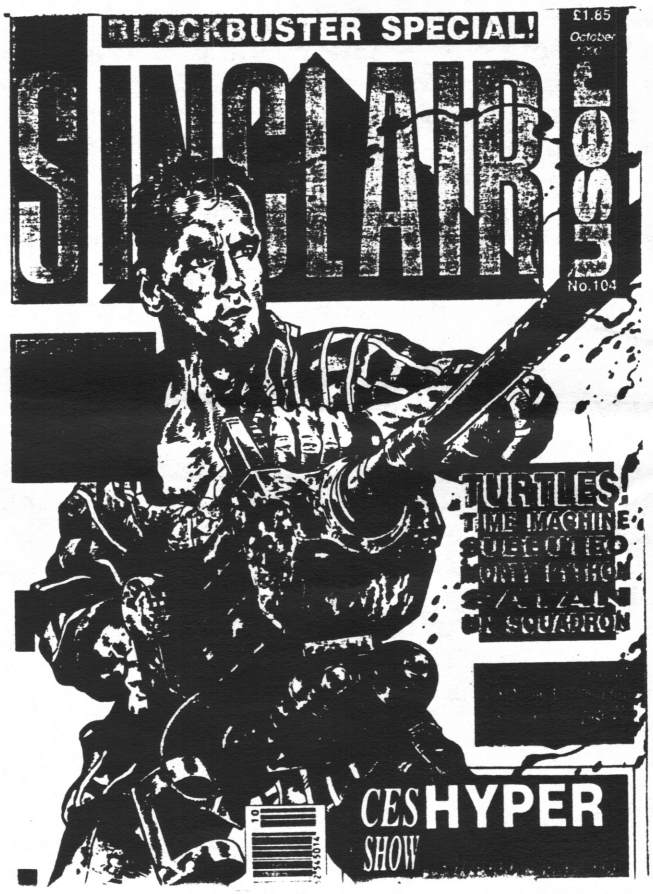
Dave inquired if there was anyone interested in obtaining the rather scarce 3 inch disks. He will investigate the possible sources if you need some.

The election of a Program Manager which was tabled at the last meeting was not acted upon for lack of a candidate. It remains tabled.

The business portion of the meeting was adjourned at 8:44. The remainder of the evening was filled with a demonstration of the Sinclair QL computer, as promised, by Ken Goods. This gave those considering the purchase of the computer an opportunity to evaluate its capabilities. The multi-tasking and networking capabilities were unexpected in a computer of this class. The rather necessary extra memory and disk drives are expensive compared to the computer itself. It would be an interesting challenge for a person with the capability and time to develop his own add-ons.

Respectfully submitted,

Malcolm Post, Secretary



Interview with Clive Sinclair

David Ahl

Clive Sinclair is the man behind the first mass pocket calculator, the first scientific calculator kit and, now, a mass-market computer. I talked to Clive while in London at the PCW show.

Ahl: How did you get started in the electronics business?

Sinclair: I started in 1962 when I first came to Sinclair Radionics. We were in the kit business with hi fi systems and pocket calculators, (we made the first pocket calculator which is on display in the Museum of Modern Art in New York). From there we went into digital watches and TV sets and for a while we were linked with a government body in the U.K. At this point I left, as this arrangement did not work out too well. I took the same people with me and reformed the company as Sinclair Research Ltd. and launched the personal computer.

Ahl: Does Sinclair Radionics and its products still exist?

Sinclair: Only as a legal entity, but it doesn't trade.

Ahl: So effectively today your main product is ZX80?

Sinclair: That's right, but it's not our main research program. Our biggest research/development program is on flat screen television.

Ahl: Have you shown that at all? Or proved its capability?

Sinclair: Yes we have. We are at the stage where we have demonstrated it and will be doing so again later this year. We have pilot production and hope to shortly be at the next stage.

Ahl: What type of technology is used?

Sinclair: It is a flat screen Cathode Ray Tube.

Ahl: Does it have electron guns?

Sinclair: It has a conventional electron gun, but instead of the beam following a straight path, it bends to a right angle and it splits the screen.

Ahl: Is it monochrome or could it be color?

Sinclair: It is monochrome today, but eventually it will be color. We will pursue that.

Ahl: That sounds very interesting. Sharp had shown one about two years ago which provoked much interest in the electronics community but nothing ever came of it. Today it doesn't look like they are any closer to a commercial product than two years ago.

The philosophy of the company is very clear—to lead in technology.

Sinclair: What Sharp showed was an early development model of vertical projection, which, novel as it was, was a long way from a commercial product. But that is not the case with ours. Ours gives a picture which is not simply as good as a conventional Cathode Ray Tube, but it is better, and all the snags have been ironed out.

Ahl: Do you anticipate that the price of this will be competitive with the existing technology?

Sinclair: Absolutely. There is no way we would introduce something which cost more than existing technology. Not only does this have more feature advantages, it has price advantages over conventional technology. But in order to achieve this and because conventional tubes are made in such vast numbers, the only way it can be competitive is to have very large scale production. That is why it will take quite some time before the tube emerges.

Ahl: About the ZX80; how long has that been in development?

Sinclair: It started in March 1979 and it was put on the market in February 1980.

Ahl: How many people were involved? It seems to be quite a breakthrough on many fronts. Did you have simultaneous projects going on to bring it to fruition? Or was it mainly you, or a small team of people?

Sinclair: There were very few people involved really. I had the original idea and some of the system ideas. Then there were about two or three engineers who were involved in the detail and design; one engineer in particular did the final design and one wrote the software.

Ahl: Some people look at it and conclude that it is no more than a larger computer scaled down to smaller dimensions, while others will look at it and think of it as one of those language translators with a little more capability. From glancing at the specifications and seeing it at the Consumer Electronics Show, I have the impression that it has much more capability than that and that it does not seem to be just a scaled down computer. What is your concept? How do you view the machine?

Sinclair: While the ZX80 is a true computer in every sense, without any inherent limitations, it obviously was restricted in performance in its minimum configuration. We wanted to sell at as low a price as we possibly could, a computer upon which people could start to learn, really seriously, how to break into computers and how to really learn what computers were about. Now that might be an end in itself for many of them, but these may be executives who want to understand computing so when they buy computers for their firms or talk to people about the use of computers in their firms, they do so from a knowledgeable standpoint and they don't feel awed by it. Equally, we see it as a very powerful aid for students wanting to

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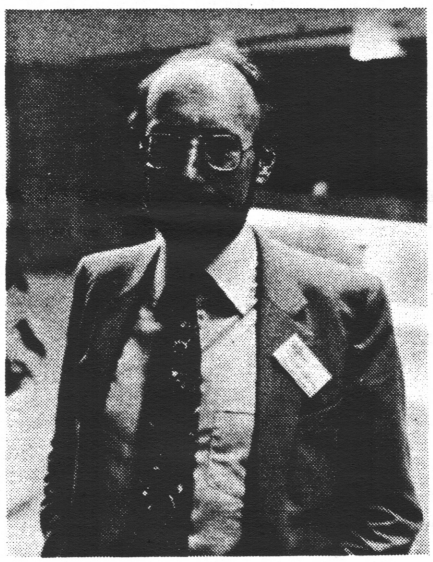
learn computing. But at the same time it is expandable. We have just announced a Basic for it — which is more of a professional Basic than the original one and a 16K byte RAM pack for it at a very keen price, (around $100), so that it can be taken from the basic configuration to a really very powerful system at a very low cost. Hence our price will be somewhere around half the conventional competitions. I would make the point that in order to do this we have done everything in-house, i.e., in the way of anything having to be specially done we had to write our own Basic because we wanted to achieve performance in the Basic as it wasn't available on the existing Basics.



Ahl: Is that Basic compatible with Micro-Soft Basic or some other Basic on the market or has it got a lot of bells and whistles that make it incompatible with others?

Sinclair: It is not compatible. It is our own. We had to take that step in order to achieve the bells and whistles that you mentioned and have those features that we feel are important to our customers. In order to hit our cost goal we had to do a better packing job than had been done before. The ROM in our basic machine is just 4K bytes which contains everything — Basic, operating system, keyboard control and display I/O. Now there is no way we could have done all that with an off-the-shelf Basic. Furthermore, we then pack data into the RAM at least four times as tightly as anyone else. We would not have been able to do that unless we had our own Basic. Another thing that we wanted was keyword entries. You may have noticed that by pressing a certain key a keyword is entered. So there is very little for a non-typist to do. A lot of people are put off in the learning stages with having to type PRINT every time and abbreviations can be misleading. We felt this was very crucial and it is not included in standard Basics, so we had to choose to go away from the existing patterns.

Ahl: Pertaining to the marketing of the ZX80, do you anticipate selling it through computer stores, department stores, or other types of outlets or through direct-mail as you have done with some of your other products?

Sinclair: We are going to sell the computer by direct-mail in England and the U.S. There may come a time when store distribution is possible, but you can't really distribute to a store until you have a much better informed public. A very large mail-order campaign may help do that, so it may be possible later to distribute to stores.

Ahl: Many people buying computers today, particularly at this price level, are concerned with where or who can they go back to for service, particularly if they buy a machine by direct-mail.

Sinclair: There are two points there: the first involves the product, the second is who to come back to for service. We have a permanent office in the States and we stand behind our product at all times. We haven't seen anything but 1% or under 1% failure rate in the field in the U.K. It is a very reliable product so we haven't got a serious problem. We operate with service contract houses and this is all part of the guarantee of the product.

Ahl: Jumping back to the technical aspect of the ZX80, it appears that although now that it is designed for a power supply to be plugged into standard power, it could probably be battery operated and completely portable. Is this in your plans?

Sinclair: Yes it is. It has a very low power consumption and could certainly run for a reasonable time on batteries. Of course you need a battery T.V. set as well.

Ahl: What about other peripherals, floppy disk, mass storage, printers etc.? Are they in the works?

Sinclair: Yes they are, we have a floppy disk coming in about a month; the other items should be out the middle of next year.

Ahl: How do you feel about other alternative forms of mass storage? Some people have said that the bubble memory is coming down in price fast enough that it may in two or three years replace the floppy disk as a mass storage device. Do you think that's likely to happen?

Sinclair: The price projections we see from manufacturers over the next two or three years don't suggest that to me.

Ahl: What else would you like the world to know about you, the product, philosophy etc?

Sinclair: The philosophy of the company is very clear — to lead in technology. We've got a good start in this field and we plan to take as good a lead as we can. Some of the things we are developing, such as the flat TV screen, a truly portable system, etc. are coming along too. Clearly we think these are things we can do. □

QL primer

Ken Goods

Happy New Year and welcome to the first QL column! Where do I start? Well maybe we should set a few ground rules for this and all articles to follow. First, and foremost, I do not claim to be an expert on the QL, (or anything else for that matter), so if you find any errors please correct me. The whole point of this forum is to learn more about, and share information pertaining to the Sinclair QL. I have as much to learn as anybody, but I'm looking forward to helping others as much as I can with the little tricks I've picked up in the five years of almost daily use. Secondly, I do not have a spell checker as of yet which means you might find a few spelling errors, you don't have to bring these to my attention.<Grin> Third, and most important, in order to make this column work I'm going to need a little input from you, the reader, as to what the subject matter should be. My initial thought is to vary the articles between home brew software, commercial software reviews, hardware reviews, and maybe some beginner Superbasic. I will include my home address with the hopes you will let me know which direction interests you the most. Now, with all that out of the way let's get on with this month's column!

For this first article, since we might have a few new QL users in the near future, I thought I'd just let everyone in the club know what I have available to lend to my fellow members. My QL library is as follows, including a short explanation of each book.

From the SINCLAIR QL SERIES:

ADVANCED PROGRAMMING WITH THE QL. Superbasic programming in a business environment. Some good logic representation and flowcharting.

DATABASE MANAGEMENT ON THE QL. A very good reference for ARCHIVE. Goes into much more detail than the users manual.

*DESK-TOP COMPUTING WITH THE QL. Pretty much an expanded copy of the users manual, with most areas addressed more thoroughly.

*INTRODUCTION TO SUPERBASIC ON THE QL. A Great starter for programming in SUPERBASIC. Loaded with interesting programs.

MACHINE CODE PROGRAMMING ON THE QL. A bit over my head at this time, but for you hardware hackers it would have all the info you would need to understand the 68008 and how it relates to the QL.

*MAKING THE MOST OF THE QL. Similar to INTRODUCTION TO SUPERBASIC, with many more interesting and useful programs. Another good book to start with.

WORD PROCESSING WITH THE QL. An in-depth look at QUILL, the bundled word processor that comes with the machine.

These next five books are part of another series published by Sunshine Books of London.

ARTIFICIAL INTELLIGENCE ON THE QL. Explains AI from the beginning assuming no previous knowledge of the subject. A demo program is included.

*DEVELOPING APPLICATIONS ON THE QL. A book similar to DESK-TOP COMPUTING from the other series, another great starters book.

QL ADVENTURES.
This book has an adventure generator, which is a program that actually creates an adventure game, complete with graphics and text. I played around with this until I ran out of room on all my microdrives and had to erase it. One of these days I will re-enter this program, it's that good.

THE SINCLAIR QDOS COMPANION.
For the machine code programmers. Describes all the features of the QDOS operating system. All system calls are covered, along with the input/output process including how the device drivers work, and locations of system variables and tables. It also covers the secondary processor, the 8049, and the multitasking abilities of the QL. Indispensable for the code programmers.

THE WORKING QL. A library of practical subroutines and programs. This would be a good book after you have a working knowledge of the QL. It goes from graphics to sound to money matters. The best book I know of to show practical examples of procedures and functions. Some handy and interesting programs.

The books marked with an asterisk would be the most valuable for the people new to the QL. (Which I hope we'll have a few of soon.) As I said, I will make these books available to anyone in the club that ask for them. The only thing I ask is, that they be returned, and that you not borrow one and then let it set in your bookshelf. Please make quick use of them so that others can also benefit from this information.

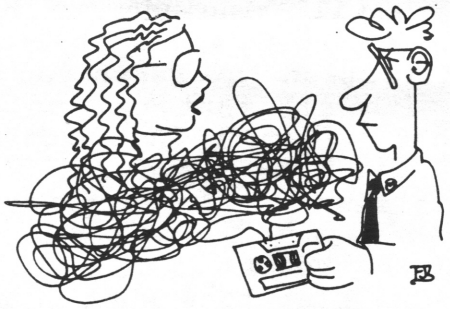
In addition to the books, all the programs I have will be available, copyrighted programs withstanding. Since most of the programs I have are self written or public domain, copyrights shouldn't be a problem.

Well since we took up so much space with all that, we'll only have room for a short program this month. This one I demonstrated at the December meeting. I just call it Baloons. It shows off some of the graphics abilities of the QL.

```
100 REMark ***Baloons***
110 REMark *by Ken Goods*
120 MODE 8
130 OPEN #1,con_512x256a0x0
140 PAPER 0:CLS
150 BORDER 1,2
160 FOR i=1 TO 500
170 LET color=RND(1 TO 7)
180 INK color
190 LET a=RND(125):b=RND(100)
200 LINE 60,60 TO a,b
210 FILL 1
220 CIRCLE a,b,RND(1 TO 3)
230 FILL 0
240 END FOR i
250 PAUSE 500
260 MODE 4
270 STOP
```

It's a pretty simple program so experiment with the variables to see what you can come up with! Next month we'll do something a little more serious. Until next month, happy computing!!

Ken Goods
4600 16th St. E. #Q-207
Fife, Wa. 98424



"Back up..what back up?"

Z88 NEWS

Michael Stone

I had an interesting talk with someone on the computer business, and the coming recession. He was saving his money to buy the computer of his dreams as soon as the shake out of the clone dealers starts happening.

"Boards selling for $15. 1meg. VGA graphic cards selling for under $100. 386SX mother boards selling for $500, with 4meg. ram."

He might be right, in some cases. First, the recession has to get deeper, then we'll see the impact on the computer industry. I asked why he wanted something as devastating to happen. Was his job that secure? Wouldn't it hurt his friends and family? I'm sure, he was just looking at a personal benefit, but the choice between eating and having a 386 computer is .....

Yes, I agree. There will be a shakeout in the computer industry and many small and some large companies will be gone. This isn't good for those that don't want to fall in step as another "me too" type person. In a shakeout, GOOD small companies go as do large mismanaged ones. Who would really want to lose a high tech low volume american designer and manufacturer (other than IBM and Bell) and have it replaced by a foreign national re-seller, selling two year old 'pirated' technology, from a country that doesn't have the right to vote in a secret ballot election. Will someone explain the savings to me.

I asked why should I be interested in this situation. He said because I owned a Z88 and wasn't I worried that they wouldn't be available in a short time. I thought that there was a chance that the Cambridge Company would survive. Most of their sales was local and the rest of the world sales was better than the states by almost two to one. I said I would feel bad as I hadn't bought all of the goodies that I wanted. It wouldn't stop me from using the computer, and it would last as long as it would last.

"Don't you want to sell it as fast as possible before the value goes away? You could get one of the new laptops, that would be better than the Z88."

He thought I only had the Z88 because I couldn't get an 'IBM' type computer for the money when I bought it. I said there wasn't a better computer for what it does, than why it can't run 1-2-3. (There is a software converter with the PC Link package that converts PipeDream to 1-2-3.) I think a computer industry based on one computer and two business applications must lose many superfluous companies. I don't know why he doesn't think the Z88 isn't worth the money compared to the latest clone available. If comparing a PC compatible portable to the Z88 sounds foolish, it is. Think of those clone boards for sale cheap in a few months, and start planing.The lowest priced new laptop is the Panasonic CF-150B, with a list price of $895, and sells locally for $595. It is a PC with an 80C88cpu @7.43mhz, 640K ram, one 720K micro floppy drive, LCD CGA 80x25 backlight screen, and MSDos v3.3 with MS GW-Basic. Let's say, you use shareware and don't pay the $45 for As Easy As v1.65 or $120 for PC-Write v3.06. You have a 6.2lb battery portable with an operating time of 3.3 hours running an excellent 1-2-3 clone and a word processor as good as Word Perfect for the base price of $595.

It is a true clone capable of running any pc software that will operate with one drive. The software will work fairly well, as both try to keep most of the file and the program in memory. This cuts down on disk access and in ram the program runs faster than another type program with a hard drive. Disk access will shorten operation time on the battery. Programs like dBaseIII will not work on a one drive computer. So we have a compatible computer not being able to run many programs because it was designed to use simpler programs to save on battery and weight.

In a few months, according to others, a desktop 386SX computer, with color VGA will sell for under $1000, that will run all of the new type 'MSDos' compatible software. But it can't leave the desk it is on.

Now I can compare apples and oranges, based only on use. The Z88 complete with ram, up to 2meg., and the Link software to either a PC, Mac or QL, weighs 2.2lbs and can operate on four AA cells for 12hrs (2meg. 17hrs w/128K) continuously. It has a built in fast text editor, and an excellent 1-2-3 type spreadsheet and can be made dBaseIII compatible; and a scheduler that is better than any daytimer, because it can ring an alarm to remind you and place the appointment on the screen. All will operate at a speed greater than any true PC speed (4.77mhz) computer as all operations are done in ram.

I was told that the expansion parts for the Z88 are too expensive, compared to the falling prices of PC hardware. A 512K ram pack for the Z88 costs $350, and 512K of 256x1 dram costs $60. The difference besides the special mounting hardware for the Z88, is the type of ram. The eighteen chips would take more room than all three slots in the Z88 and use .5amp current at five volts, or about fifty minutes of operation with four new alkaline cells. If one was to compare to a PC, the memory card for the Toshiba T1000 computer is about 40% larger than the Z88 ram drive and cost $625 list ($385 net.) It uses three banks instead of two (Z88) of the same type of low power cmos static ram. There were more ram boards for the (now defunct) T1000, than Z88s sold in the states. Most of the ram boards sold for list, as the one meg ram boards for the new T1000x series sell for $550. (The cost of a 256K cache of Sram for a 20+ mhz. 386cpu, costs $250. These prices won't go down until the manufacture exceeds demand, which hasn't happened in the last four years.)

The Z88 is a complete computer system. The only program lacking in rom is a decent modem program. The terminal program and the import/export program do work for ASCII files, but americans are used to decent modem programs. [Editor R. Cazares should be the one to write about operating a modem with the Z88, as he is our resident telecommunications expert.] I will say that I have used the Public domain modem program for the Z88, with an old Epson 300bps battery operated acoustical coupler, from a pay phone on the street, it worked perfectly. I didn't transfer any files at the time although I could have.

I haven't mentioned the version of BBC Basic in the computer as I'm not proficient enough in basic to comment. I do know it is the most powerful version of basic in rom at this time. MS Basic is the defacto standard for Basic, and all of the commands in BBC Basic in the Z88 are useable on the PC [graphics as hardware bios calls are machine specific].

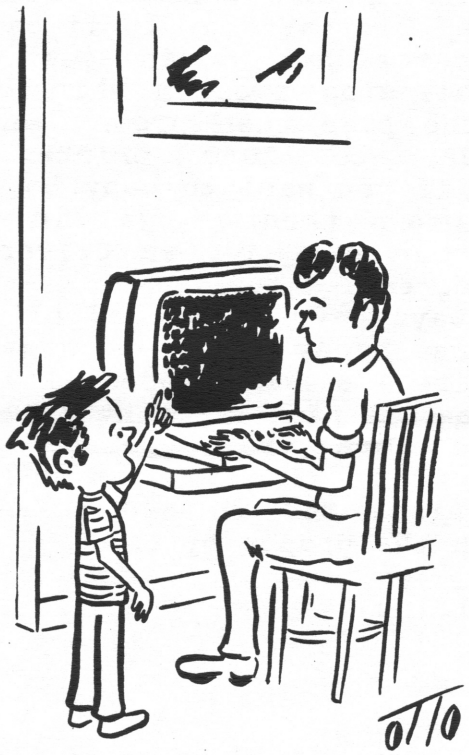
Another major Z88 program in rom, is the Printer Editor. I transfer all my writing to another computer to edit and layout on, so I use the printer editor, rarely. This is the program used to setup your printer. (Epson MX is the default.) One could have the Z88 drive almost any printer with the editor. If you want to use the three different screen fonts to represent other fonts with the printer this is done with this editor. I have printed a few letters with the Z88, to prove to myself it is a complete system, and I was impressed how easy it was done and how good it looked. The on screen map of the working page is used to get the look and feel of the page and the visible page breaks are imbedded in the text. As with any word processor, the page break can be forced at any time and the page length and the margins can be set. Probably the most interesting feature of a separate page formatter is that it is available for all of the programs. Along with the map, all output sent to the printer

can be controlled and viewed with ease.

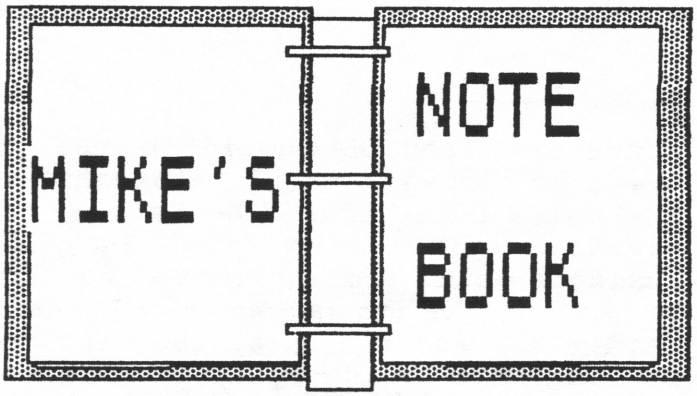
In a one program, one computer society, The Lotus PC. I am proud to be one of those 'brave' souls, wanting power and light weight, over rote conformity. In our local paper recently, was an ad for the first version of the NEC Ultra- Lite, used for $600 [sold, when I called]. New, it had a list price of $2495; it was sold as 'state of the art' and an example of the future. The reason for sale, the owner needed a more powerful computer capable of operating 1-2-3 better, and maintaining a large database of clients and phone numbers. His company was going to buy the new T.I. Mate3000 for him, so what ever he could get for the old computer was his. He couldn't find a buyer at the original asking price of $1000. He kept lowering the price two hundred dollars each week, until he decided to offer it for sale in the paper. It took three days to sell.

When I told him, I wanted an Ultra-Lite, until I found the Z88; he told me how he had used HIS Z88 for most of his work and thought the NEC would impress his clients better. It did, but he admitted Pipedream did the recalculations faster than 1-2-3 on the NEC. His major complaint about the Ultra-Lite was the 1.5 hour operating time and 10 hour recharge time for the Ni-cad battery pack. [The main impovement on the latest model is the inclusion of a battery door, faster recharge (7 hours), and installable battery pack.] He said the best feature of the Ultra-lite was the credit card type, lithium battery backed, 1meg, interchangeable ram drives ($800 from NEC). He had the need for the ram drive, but he could do more with a 286 and a 20 meg. hard drive. He had out grown the NEC, as he out grew the Z88.

I told him that there was a 1meg ram pack for the Z88, now. He thought that would be perfect except the relational database in rom was slow (not the internal mini flat file of Pipedream) and he couldn't use the 2megs of ram with the database and the PC-Link, both true. He would have liked staying with his Z88, but business and some clients couldn't handle not being shown a PC. As he said, "Sales is based on an $800 Italian suit and carrying the smallest phone and /or the latest portable PC. The more they marvel at the toys, the easier it is to increase their order." This from a man, who would still like to carry his old Z88. A person experienced in both, knowing that a portable computer is an extension of the desktop, and knowing the difference between the PC and other computer world.



*"When you're through Dad, I want to write a program to experiment with the effect of a different coefficient on a plot of a polynomial of the form Y (X(= A*X + B*X + C."*



by Michael J. Di Rienzo

I like to work with computer graphics on the TS2068 and I frequently need to look up bit patterns for User Defined Graphics characters. Knowing the bit patterns of a specific byte can also help to better understand machine code among the many other uses.

The following BASIC program will print out all 256 bit patterns, their hexadecimal and decimal equivalent. A zero is represented as a blank box and a one is a filled box. In fact, the UDG "A" and "B" are poked with their pre-planned bit patterns in lines 300 to 340. To see what I mean, just type in the following program which will fill up the page then prompt you to Quit, COPY to 2040 printer or CONTINUE. If you want to copy to full sized printers then change line 240 and add your own printer driver to COPY the screen.

I always have a copy of all the bit patterns handy while programming. I added line 115 and changed line 120 to increase the pattern print speed by 65%. Make sure that you use UDG graphics "A" in line 140 and UDG "B" in 150. Lines 300 to 340 POKE the UDG's with the proper bytes.

Happy TIMEXing...

"BITS" By Michael Di Rienzo

```
 10 GO SUB 300
 20 POKE 23658,8: LET n=0
 30 LET h$="0123456789ABCDEF"
 40 FOR c=1 TO 2
 50 IF c=1 THEN LET c1=0: LET c 2=4:
    LET c3=7
 60 IF c=2 THEN LET c1=17: LET c2=21:
    LET c3=24
 70 PRINT AT 0,c1;"Dec";TAB c2;
    "Hex";TAB c3+1;"Binary"
 80 FOR z=1 TO 21
 90 LET s=INT (n/16)
100 PRINT AT z,c1;n;TAB c2;h$(1
    +s);h$(1+n-16*s);TAB c3;
110 FOR b=7 TO 0 STEP -1
115 LET l=1: FOR w=1 TO b: LET l=l*2:
    NEXT w
120 LET x=INT (n/l)
130 LET t=x-INT (x/2)*2
140 IF t=1 THEN PRINT "A";
150 IF t=0 THEN PRINT "B";
160 NEXT b
170 PRINT
180 LET n=n+1
190 IF n=256 THEN GO TO 220
200 NEXT z
210 NEXT c
220 PRINT #1;AT 1,0;"(C)opy,(Q)
    uit,ENTER to Continue"
230 LET q=CODE INKEY$
240 IF q=67 THEN COPY : LPRINT : IF n
    THEN CLS : GO TO 40
250 IF q=81 THEN STOP
260 IF q=13 AND n=256 THEN STOP
270 IF q=13 THEN CLS : GO TO 40
280 GO TO 230
300 FOR n=USR "A" TO USR "A"+15
310 READ a: POKE n,a
320 NEXT n
330 RETURN
340 DATA 0,0,126,126,126,126,12
    6,0,0,0,126,66,66,66,126,0
```

Spectrum
game review

If you have a Spectrum then you have the option of buying some of those fabulous games available from England. Makes you wonder why we don't get to see many of these fine games here in the US for the Sinclair computer from software houses as OCEAN, U.S. GOLD, CAPCOM, and Konami. The reason is simply that there is no major support for Sinclair(what else is new) and the support for Sinclair Spectrum in England is really now the Amstrad Spectrum. If you didn't know, Alan Sugar(Mr Amstrad)bought out Sinclairs' token operating system a few years ago.

Walk into any arcade and these will be the names on the copyrights of many of the quarter chompers and fact is all the above mentioned software houses make conversions of their games for the Atari, Amiga, IBM, Commodore 64, and Amstrad Spectrum. I should know because I have a small collection of SINCLAIR USERS games tapes from the past several years. SINCLAIR USERS is a magazine published in London that supplies every monthly issue with a tape with games and pokes. Some of these games are demos and others are full fledged playable games. And other times they include pokes to help you cheat your way through a game. It's a very attractive magazine loaded with color, advertisements, games reviews, and everything else that makes a top notch magazine what it is.

And now for something completely different! It's Monty Python's Flying Circus, the computer game. First you get to correctly identify a number of cheeses using the Cheeselok program protection system. Then you may enter the game itself which has been heard described as, "more fun than a large barrel of salted herring".

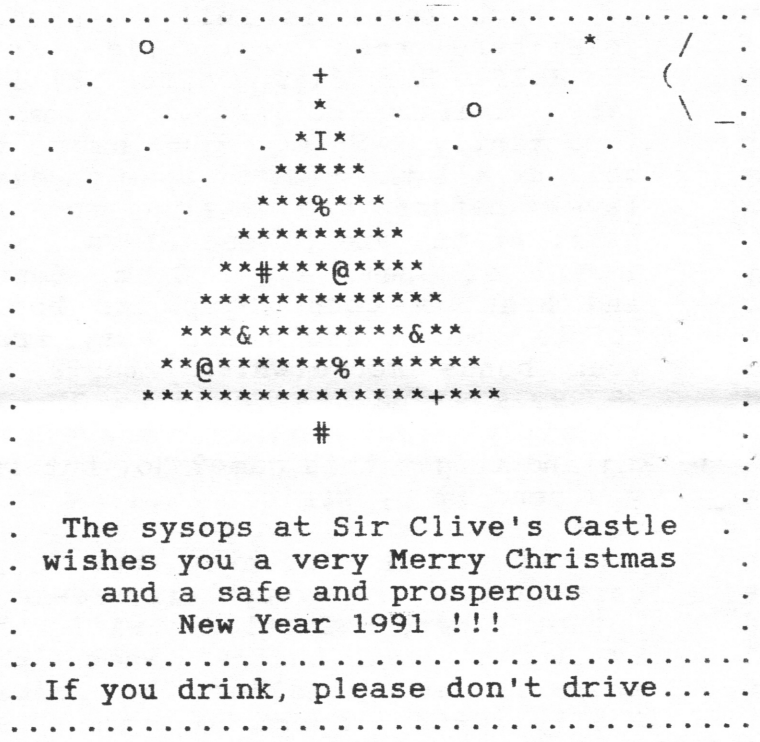
Each level is full of python jokes-hand trees, flying pigs, Eric the Half a Bee, flying sheep, killer cars, traffic bollards, and most importantly, Spam. You have to collect all the tins of Spam on each level before progressing to the next. At the end of each level, the amount of Spam, Eggs, Spam, Beans and Span is counted up for bonus points, which are taken away from your bonus score(which starts at 99,999,999 and goes down to 0). Is it silly? Yes. Would I travel to England to get this game? No, but if you send it by African Swallow I'll take it!

Oh no! They're here too? Those darn turtles are everywhere. Teenage Mutant Hero Turtles will be available soon(that's what the advertisement said)for the Amiga, Atari, C-64, Spectrum, and IBM computers by Konami Industry Co. Ltd. Are these guys the Smurfs that grew up or what? I've accepted the fact that I have a mouse for my computer but a turtle is going a little too far for my taste. I wonder what these teenagers are going to be when they grow up!

Here's the list of the top twenty full-price games as reported by SINCLAIR USER:

1) ITALY 1990
2) Football Manager World Cup
3) Manchester United
4) Shadow Warriors
5) Turrican
6) World Cup Soccer
7) Addidas Championship Football
8) Rainbow Islands
9) Chase H.Q.
10) Robocop
11) World Cup '90 Compilation
12) Bombed
13) Batman - The Movie
14) Ghouls 'N Ghosts
15) Gazza'a Super Soccer
16) Emlyn Hughes Int. Soccer
17) Turbo Outrun
18) International 3D Tennis
19) ESC FTP of the Robot Monsters
20) Dan Dare III

So it's not super vga, big deal.


The sysops at Sir Clive's Castle
wishes you a very Merry Christmas
and a safe and prosperous
New Year 1991 !!!
If you drink, please don't drive...

SIR CLIVE'S CASTLE BBS

(613)745-8838

T/S 2068 * ZX Spectrum	
Q W E R T Y U I O P A S D F G H J K L RET Z X C V B N M S SP	LKDOS

W E L C O M E !

Sir Clive's Castle BBS is dedicated to all serious users of Sinclair computers and provides upload and download facilities for the Timex/Sinclair 2068, ZX Spectrum emulating Timex/Sinclair 2068 and the Timex/Sinclair 2068 running the Zebra OS-64 Column Board.

Your sysops are:
Michael Dove -- BBS Hardware
And
David Solly -- SIG's & Library

This BBS operates free of charge, and will for a short time be open to all callers, see details below.

Membership applications and enquiries should be made at the Sysop's Message Base or in writing to:

Sysop,
Sir Clive's Castle BBS,
1402-1545 Alta Vista Drive,
Ottawa, Ontario,
Canada.
K1G 3P4

Hours of Operation

Sir Clive's Castle BBS is in operation
24 Hours A Day
BBS Software: LARKEN MaxBBS
for the Timex/Sinclair 2068

For a time I shall be opening the system with a special log-on and password so that all callers may have access to the messages bases and the up and download area.

When asked for your name type: Special Guest
When asked for your password type: Clive

If you have already been assigned a log-on and password, please use it. If you like this BBS and plan to be a regular caller, please apply for an individual password which will allow me to identify callers and to keep the stats necessary for efficient running of the system. If you wish information on how to become a member, type your name and log-on as a guest. Instructions will follow automatically.

How long this BBS remains open and whether this becomes a permanent set-up depends solely on the conduct of the callers. Meanwhile, Enjoy your visit.
-- David Solly, Sysop 24 November 1990

Message # 1
TO - ALL
Subj - Welcome!

Welcome New Members!
We hope you will enjoy your stay at Sir Clive's Castle BBS. If you have not read the Help Files, please do so. They can be reached by typing "H" at the Main Menu. If you have questions, please leave them at the Sysop's Message Base. When typing messages, please go slowly and carefully -- the message entry system is a bit primitive but ways to improve it are being sought. Also, please sign and date your messages, thank you.
-- Michael Dove & David Solly, Sysops, 23 September 1990. Message # 3
TO - SYSOPS
Subj - Sinc board

This is a great idea. While, in truth, the Sinclair computers are not capable enough for many business applications, they still work just as well as they did back in 1980 or whenever they were introduced. Something which I think tends to be forgotten nowadays is the simple fact that old things work just as well as new.

It is too bad that there is no longer a $50 computer available on the general market. My ZX81 provided a perfectly good way for me to learn programming, and its 200+/- page manual was more helpful to me than most of the 500 pages which came with my first PC compatible.
I am impressed by the ability to run a BBS, albeit a low-end one on a Sinclair. Keep up the good work

Message # 4
TO - ALL
Subj - Larken file names

What is Larken file naming convention?
I looked in the file list and saw some unfamiliar extensions
Also, what is the capacity of a Larken disk?

Message # 5
TO - ALL
Subj - Larken fnames

There is a blurb on Larken file names in the help section. Type "H" at the main menu and then read the article under up and downloading. The capacity of a Larken disk is:400K for DD/DS and 800K for QD/DS. -- David Solly, Sysop 4 December 1990

Message # 6
TO - SYSOP
Subj - TIMEX SINCLAIR

Hi I'm Roger R Glover,
R.R.# 2
Kemptville
K0G 1J0
I mainly use apple][e computes but I have several fully loaded ZX81s. I didnt know anyone was inteested any more. Does the Sinclair Users Group still meet at the NRC?

Message # 1
To -LARRY KENNY
Subj - TASMAN CIF

Larry, I have your disk interface for the 2068 and the version 3 LKDOS cartridge. I am trying to use the Tasman Printer interface with your system, but when I try to read my disks, I just get garbage on the screen. I initialized the interface alright. The printer prints out fine. But I can't get a catalog or program from the disk. Without the TASMAN, the disks work fine. Can you help me out?

Message # 4
TO - ALL
Subj - Tasman CIF

There are some versions of the Tasman Interface which are simply incompatible with the Larken DOS. Tasman CIF may be one of them. One of our callers has a Larken system and a Tasman inteface. I think he solved his problem. I will see if I can have him contact you. P.S: Please sign and date your messages. Thanks.
-- David Solly, Sysop 21 Nov. 90

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Converting From Other Basics

David Lubar

While Basic is a distinct computer language, it exists in many forms. Thus, a program written for another machine might have to be converted before it will work with the Sinclair. This series will deal with conversion techniques, in hopes of allowing you to get as many programs as possible running.

A command found in many Basics is STEP. This is used in FOR-NEXT loops when an increment other than one is desired. For example:

```
10 FOR = 1 TO 9 STEP 2
20 PRINT I
30 NEXT I
```

This program will print the odd numbers from one to nine. At each pass through the loop, the variable I will increased by two. STEP can also be negative:

```
10 FOR I = 10 TO 1 STEP -1
20 PRINT I
30 NEXT I
```

In this case, I will decrease by one on each pass through the loop.

There is no STEP command in Sinclair Basic. Fortunately, there is an easy way around this. Loops are convenient, but they can always be replaced with IF-THEN statements. This is done by using a variable for a counter, and checking to see whether it is still in the desired range. If it is, the program portion is repeated. A simple loop such as

```
10 FOR I = 1 TO 10
20 PRINT I
30 NEXT I
```

could be replaced with

```
10 LET I =1
20 PRINT I
30 LET I = I + 1
40 IF I < 11 THEN GOTO 20
```

Line 10 initializes the variable. After the desired action is performed by line 20, line 30 increases the variable. Then, at line 40, the variable is checked to determine whether it is still within the set limits. A value of 11 was used since we want the action to be performed ten times. The variable is increased and checked after the action since this is the way it is done when using FOR-NEXT loops. As might be obvious now, the STEP command is equivalent to the actions performed by line 30. In this case, the STEP was one. For other steps, all that is needed is a change of the values used. For instance, the first example could be rewritten as:

```
10 LET I = 1
20 PRINT I
30 LET I = I + 2
40 IFI < 10 THEN GOTO 20
```

For the second example, with a negative STEP, you would use

```
10 LET I = I
20 PRINT I
30 LET I = I - 1
40 IF I > 0 THEN GO TO 20
```

Notice that when replacing the negative STEP, a > was used, while a < is used in positive STEPS. In either case, you have to check to see if the value has gone beyond the desired range.

Some programs use fractional values for STEP. In some cases you can get around this by multiplying everything by a constant that will make the STEP value an integer. In other cases, where the decimal value is essential, this won't work.

Future articles will cover other conversion techniques, showing how to get those strange looking programs to run on the ZX-80.

Editorial

by David Lubar

The Sinclair ZX80 is the new kid in town; a short-lived position in this rapidly changing field. In the past few years, several dozen personal computers have made an appearance. Some are thriving, others have fallen into the obscurity of bargain sales. We believe that the Sinclair is going to be one of the winners; otherwise, there would be no sense in starting this magazine. So, what are our plans? We aim to cover many levels, with articles that will help beginners, as well as features for pros.

The Sinclair is an exciting machine with a lot of potential, and we hope to reflect this in the programs and articles we publish. There will be plenty of games, both new ones and conversions of classics. As new aspects or hidden capabilities of the Sinclair are discovered, we'll pass the information on to you. As you make discoveries, we hope you'll take the time to write articles for us.

There is another question tied in with this: what happens when Sinclair owners begin to get extended Basic and expanded memory? Inevitably, there will be a time when our readers cover the full spectrum from those with minimal systems to those with fully expanded ones. This might seem to pose a problem, but the problem is not unique. Several of the popular home computers started out as very small systems with little memory and modest Basics. As memory became less expensive, most owners expanded their systems. For a time, computer magazines dealt mostly with the original configurations, and occasionally ran an article or program aimed at expaned systems. Later, the coverage shifted, but the smaller systems were not ignored.

This will probably be the case with SYNC. We'll stick to the 1K RAM 4K Basic machine now, while running a few pieces designed for other configurations. Later, there will most likely be more attention given to expanded systems, but plenty of coverage will still be dedicated to the original model. In a way, this will be determined by you. Much of our material will come from free-lance submissions. As more writers expand their Sinclairs, we will receive more articles and programs aimed at larger systems. But it must be stressed that SYNC will never ignore those pioneers who own the original model.

New Peripherals from Sinclair

Printer

"Extremely low cost." That's the answer I got when I asked Nigel Searle about the forthcoming Sinclair printer. Relentlessly, I pressed for more.

It is a line-at-a-time printer and only prints a line when the user hits NEWLINE. "Seems awkward," said I. "Extremely low cost," said Nigel.

It has a 32-character line, the same as the display. "That means non-standard paper," said I. "Extremely low cost," said Nigel.

The printer uses a dot matrix and prints the complete ZX80 graphics character set. "Very nice," said I. "Yes," agreed Nigel.

Flat Screen Display

When I interviewed Clive Sinclair last fall, he indicated that the major research program at that point was flat screen television. Nigel Searle informs us that working prototypes have been produced and that a factory is now being built to produce the units. Production units are expected by December 1981.

The CRT measures 3 inches across the diagonal. Sinclair is currently considering a projection device to increase the effective picture size to 5 inches. The CRT tube is an astonishing 3/8" thick.

A standard, but miniature, projection gun shoots the beam parallel to the surface of the screen and it is then bent. The principal itself is not new, however, this is the first time it has been successfully executed.

Clive Sinclair was emphatic that the company would not introduce anything that was not price competitive with existing technology. However, he would not elaborate on the price of the flat screen TV in September when we talked. Now, with four months of additional experience with the unit, Nigel tells us that the original retail target price was $125 or £ 50. This was for a broadcast TV receiver. (Existing conventional 3" units now on the market carry retail prices of $200 and up.) However, more good news. It appears by employing a highly automated production line, the original target price can be beaten down some 40% to $75 or £ 30.

Sinclair Withdraws 8K Basic ROM

We read with interest in *Computer Weekly* that Clive Sinclair has withdrawn the 8K Basic ROM chip for the ZX-80 until the first quarter of 1981. This occurred only a month after it was announced to the world (September 11, 1980). He denies rumors that software bugs are the cause and blames the delay instead on the incorporation of extra functions.

The 8K ROM chip is supposed to directly replace the original 4K ROM even though there is no upward compatability between the two slightly different Basics. When it eventually appears, the 8K ROM will enable the ZX-80 to work in floating point arithmetic to 9-digit accuracy.

The extra functions now being incorporated in the chip mainly consist of a printer driver. The printer is planned for introduction in the first half of 1981.

In explaining the product announcement and subsequent withdrawl, Sinclair stated, "We were caught out. We wanted to bring out the 8K as soon as possible, but on the other hand we did not want to be severely critisized at a later stage when we would have to bring out another version."

8K Basic ROM

Originally announced in September 1980 and then withdrawn, the 8K Basic will probably be out by the time this is printed.

The new one differs from the original in that it incorporates a printer driver routine and one other new feature about which Sinclair is being quite secretive. Some minor functions were cut out of the first version to make way for these two new features.

Sinclair either doesn't know or isn't saying whether the 8K Basic will work in the MicroAce. Apparently there is no love lost between the two companies even though they have a rather close business licensing arrangement. Reputable sources tell us that, indeed, the 8K ROM will work in the MicroAce.

30 Programs for the Sinclair ZX-80 — a Review

David Lubar

30 Programs for the Sinclair ZX-80, by Melbourne House, Glebe Cottage, Glebe House, Station Road, Cheddington, Leighton Buzzard, Bedfordshire, England, distributed in the United States by Image Computer products, 615 Academy Drive, Northbrook, IL 60062, 111 pages, paperback $14.95. 1980.

30 Programs for the Sinclair ZX 80 published by Melbourne House, contains games and utilities that will run in 1K of memory. But the book is more than just a collection of programs; it is a storehouse of valuable techniques and tricks. While many of the programs are entered in the usual way, some are entered in ways that expand the capabilities of the Sinclair. For example, several of the programs come in two parts. The first part accepts inputs which are stored as data for the second part. In "Lunar Lander," these data are used to draw the rocket ship. In "Dr. ZX-80" (see Creative Computing's *More Basic Computer Games* for the original Dr. Z), the data are used to store strings in memory.

These techniques alone make the book worthwhile. Add to this the fun of the games themselves, from a simple "Leap Frog" to the complex programming of "Gomoku," and you have a bargain that should be a part of every Sinclair owner's library.

The listings are presented in clear, large type. The numbers are larger than the letters, thus avoiding confusion between zero and the letter O, as well as one and the letter I. Each program is preceeded by a description which covers any special techniques used. The only shortcoming is the lack of sample runs. It is always nice to see what a program does before going to the touble to enter the whole thing. Also, sample runs can help show where you went wrong if there is an error in your typing. Despite this, the book is highly recommended.

You will find two programs from the book reprinted in this issue of SYNC. "Life" and "Draw a Picture" were reprinted courtesy of Melbourne House Publishers.

SWYM

swym is the newsletter of the Seattle Area Timex/Sinclair Users Group. We publish on a monthly basis.

SUBSCRIPTIONS are $10/year.
c/o Dave Battershill
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ADVERTISING is accepted. Contact Chuck Kereluck for advertising rates.

ARTICLE CONTRIBUTIONS
Please submit all article contributions UNFORMATTED and in ASCII please. Pixel Print files will also be accepted.

Letters to the Editor

Dear SWYM, My son was home sick from school with the flu and caught me playing Captain Blood on my Speccy. He asked me if he could play. I ordered him out of my room for fear of my speccy catching his viris. Is this at all possible? I mean with the threat of computer viruses invading computers I just didn't want to take a chance. So please clear this up for me as my son now refuses to speak to me. Oh, he says if you print his picture he'll feel much better.
Leon Westerfield, Toke, WA.
PS Mum says hi.
PPS We love swym!

◘ hmmmm, sounds like you need to read Shirley McClain's book especially if you're spending too much time at the speccy and not paying attention to your spirituality. Leon your computer can not get a virus from another person so there's no need for alarm. Our advice to you would be to go out and buy an AT clone and give the speccy to your son. How would you like the guys at the office to know about your "Blood" sessions? We DO know where you work!
And no we won't print his photo. Sorry.

Dear SWYM A friend just gave me a Timex/Sinclair 1000 computer. I like it and everything but I was wondering where the reset button is? Do you think my friend gave this computer to me because it was defective in manufacture? A confused reader.

◘My, you are confused aren't you? There IS NO reset button silly!

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